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ABSTRACT

Three years of evaluation activities were conducted by the Institute for Developmental Studies (IDS) at New York University for the 1973-1976 program years of Project Mainstream, a Title III, ESEA project in New York's Lower Hudson Region. This work was carried out with the cooperation and support of the Yonkers, New York school system. Objectives of Project Mainstream were: (1) to train both regular and special education teachers in the theory and application of behavior analysis; (2) to train teachers in specific procedures for the design of individual student curricula; (3) to re-integrate mildly handicapped special education children gradually back into regular classroom programs; (4) to plan for and guide the gradual role change of the special education teacher from a self-contained role to a resource teacher; and (5) to train and work with parents in developing and applying appropriate behavioral techniques in the home to reinforce their children's progress at school. The primary focus for the evaluation was assessment of the effectiveness of re-integrating mildly handicapped children presently enrolled in special classes into regular classrooms. The evaluation summary, recommendations, and requirements for successful project implementation are included. A sociometric rating scale form and a public opinion survey questionnaire form are also appended. (Author/MV)

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A THREE-YEAR EVALUATION OF "PROJECT MAINSTREAM"

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Objectives and Background

The following report is a three-year summary of evaluation activities conducted by the Institute for Developmental Studies(IDS) at New York University for the 1973-1976 program years of Project Mainstream, a Title III, ESEA project in New York's Lower Hudson Region. This work was carried out with the cooperation and support of the Yonkers, New York school system acting as the Local Educational Agency. Included in this evaluation report are findings based upon the ongoing operation of the project for each of the three years as well as a summary of follow-up data collected from laboratory schools participating in the first two years.

Objectives

Objectives of Project Mainstream were:

1) to train both regular and special education teachers in the theory and application of behavior analysis;

2) to train teachers in specific procedures for the design of individual student curricula;

3) to re-integrate mildly handicapped special education children presently in self-contained classes gradually back into regular classroom programs;

4) to plan for and guide the gradual role change of the special education teacher from a self-contained role to a resource teacher; and

5) to train and work with parents on an ongoing basis in developing and applying appropriate behavioral techniques in the home to provide reinforcement of their children's progress at school.

The primary focus for the evaluation of these objectives was assessment of the effectiveness of re-integrating mildly handicapped children presently enrolled in special classes into regular classrooms. Such assessment included measurement of the academic and social adjustment of mainstreamed children as well as measurement of the degree of acceptance of Project Mainstream by participating special education and regular classroom teachers, building principals, administrators, and parents. The overall objectives set for this evaluation were:

1) the development, administration, analysis, and interpretation of measures to assess the results of mainstreaming, with specific focus on indicators of children's growth and classroom adjustment; and

2) the development, administration, analysis, and interpretation of measures to test the climate of acceptance of Project Mainstream by participating special education and regular classroom teachers, principals, administrators, and parents.

Number and Nature of the Subjects

The number and categories of persons directly exposed to Project Mainstream for the three years of the project are summarized below:

	1973-1974	1974-1975	1975-1976
Schools	10	12	12
Special Education Children	90	139	130
Teachers	60	77	98
Principals	10	12	12
Parents	83	148	162

Of the 34 schools involved in the project over the three-year period, only 28 had self-contained special education classes. Five of the schools without such classes were parochial schools; in the remaining school, children designated as requiring "special education" had already been mainstreamed into regular classes when the project began. All but a very few of the children in self-contained classes were classified as "learning disabled." Some children also were considered to be "educable mentally retarded."

Program Design

Each laboratory school participated in Project Mainstream for a one-year period only. In each school, a number of special education and regular class teachers volunteered for a ten-week training workshop in the techniques of applying behavioral principles to classroom management, curriculum design, and individualization of instruction. Teachers were paid for their participation. Each teacher was responsible for submitting a case study of a student with inappropriate social and/or academic behavior making use of the behavioral techniques learned in the workshop. Remedial programs for these students were then designed by the teachers and the project staff. In addition to the case studies, teachers were given instruction in the use of individualized mathematics and reading programs developed by the project staff.

At the conclusion of the ten-week training program, plans were made in each school for the participants to continue meeting on a regular basis. During the remainder of the school year, each project consultant (a highly experienced and specially trained special education teacher) spent two days per week in each of two laboratory schools and demonstrated new materials, showed films, and made plans for the continuation of project objectives after funded support would cease.

Each school developed a plan to follow when a special education student was ready to be mainstreamed into a regular class program and project consultants provided assistance in the implementation of mainstreaming. Actual mainstreaming varied from integration into only one or two areas to full integration into a regular class regimen. Concurrently, consultants offered guidance in the gradual role change of the special education teacher from teacher of a self-contained class to a resource teacher.

Finally, each project consultant planned a series of workshops for parents, focusing upon behavioral techniques that could be used at home. Project staff selected appropriate books, films, and printed material for the parent group in each laboratory school.

Evaluation Design

Data Collection

It should be noted that, due to funding constraints, it was not possible to select a comparison group of special education children not participating in Project Mainstream.

A. Pupil Data

1. Years 1 - 3. Academic growth of children participating in Project Mainstream was measured by the Metropolitan Achievement Test (MAT) (Durost et al., 1971) and the New York State Test in Reading and Mathematics (this latter test was used minimally in 1975-1976). Pre-testing was completed by the project staff in the months of

November and December; post-testing was completed in May.

Appropriate levels of the MAT were selected according to the functional level of the child rather than by chronological age and included Readiness, Primer, Primary I, Primary II, Elementary, and Intermediate levels. Each child was administered the same level for both pre- and post-test but completed a different form of the test for each testing period. The New York State test was administered in one of the two parochial schools involved in the project in 1975-1976 and was used for analysis of academic growth at the request of the school.

2. Year 1.* The effect of Project Mainstream on participating children's self-evaluations was measured by pre- to post-test change on the Lipsitt Self-Concept Scale for Children (Lipsitt, 1958). To complete this instrument, the child is provided with a list of 22 adjectives, e.g., happy, proud, and is asked to rate the extent to which each of these stimulus words applies to her/his actual self ("How I think about myself") and her/his ideal self ("How I wish I could be"). An overall score can be generated by subtracting the total real self concept score from the total ideal self concept score.

3. Years 2, 3. Children's perceptions of the locus of control of reinforcements were measured by the Bialer Locus of Control Scale for Children (Bialer, 1961). This instrument is a 23-item scale indicating the extent to which a child perceives that (s)he is or is not in control of factors in the environment (i.e., internal vs. external control). The Bialer scale was administered to a sample of participating children by project consultants in the Fall and Spring and was completed by the children either individually or in groups depending upon the children's ages and ability to comprehend the questions on the scale.

4. Year 1. An index of the social integration of mainstreamed children was obtained through the report of a "naive" observer who assessed the extent to which mainstreamed pupils could be differentiated from their non-special education classmates. This observer was "naive" in that although highly trained in special education, she neither had prior contact with any of the children observed nor was she given any information concerning them. The observer was sent to four regular classrooms in two schools and was asked to note any behavior either by a child or toward a child which appeared to separate a special education pupil from the other children.

5. Years 1 - 3. A measure of the integration of mainstreamed children in the regular class setting was obtained through the comparison of sociometric ratings of children mainstreamed at least 50% of the school day with the average of the sociometric ratings of their classmates in "receiving" regular classes. Sociometric status was defined by scores on the Sociometric Rating Scale developed at the Institute for Developmental Studies (see Appendix A).

B. Data from Participating Teachers, Principals, and Administrators

1. Year 1. The Rucker-Gable Educational Programming Scale (Rucker and Gable, 1973) was selected by project staff to measure change in teachers' attitudes regarding the placement of mildly handicapped children in regular school classrooms. This instrument was administered to all special education and regular class teachers in November and May of the project year.

2. Year 1. The attitudes of teachers, principals, and adminis-

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* The instruments used varied somewhat from year to year due to special interests and needs of the schools, project staff, and evaluators

-trators toward specific aspects of the program were measured at two time periods. The Semantic Differential technique (Osgood, Suci, & Tannenbaum, 1971) was adopted for this purpose since it was flexible enough for application to several program components and is a unique instrument whose purpose would not be readily apparent to the respondents.

Attitudes were measured toward seven concepts: Project Mainstream, Children with Learning Problems, Children with Social Problems, Special Education Classes, Behavior Modification, Parent, and Evaluation. Items used were derived from adjective pairs falling on the Evaluative factor of the Semantic Differential (see Appendix B).

3. Years 2, 3. Teachers' attitudes toward Project Mainstream were assessed by a 32-item Likert scale constructed by the evaluation staff. This instrument consists of three subscales tapping attitudes toward mainstreaming, Behavior Modification techniques, and certain aspects of the teacher-training curriculum (see Appendix C). The Mainstreaming subscale consists of 21 items and includes items 1-5, 8, 9, 11, 12, 14-20, 25, and 28-31. Items relating to Behavior Modification are numbers 6, 7, 10, 21-23, 27, and 32, The three-item Curriculum subscale includes statements 13, 24, and 26.

Questionnaires were given to participating school staff by the project consultants in the Fall and Spring and were mailed by the teachers directly to the evaluators.

4. Years 1 - 3. Additional assessment of the program by participating teachers was accomplished by a Teacher Reaction Sheet constructed by the evaluation staff (see Table 27). Teachers filled out this sheet at the end of the school year and mailed it to the evaluators.

5. Years 1 - 3. A Reaction Questionnaire developed by the evaluation staff was administered to each building principal at the end of the school year (see Table 28). These questionnaires were mailed directly to the evaluators.

6. Year 1. At the close of the first project year, questionnaires were mailed to special education administrators to obtain their assessments of program operation (see Table 29).

7. Year 2. At the end of the second year, a sample of special education administrators was interviewed by the evaluation staff in order to provide data on these administrators' assessments of the two years of Project Mainstream.

C. Parent Data

In the Spring of each of the three years of project operation, questionnaires were mailed to all parents of special education children participating in Project Mainstream (see Tables 30-32). Included with these questionnaires were a cover letter from the evaluators and a self-addressed, stamped envelope for return mailing.

D. Follow-Up Data

Questionnaires were mailed to all building principals and special education teachers participating in the first two years of project operation. These questionnaires focused upon factors relevant to successful program continuation and allowed for programmatic recommendations by participants.

Data Analysis

A. Pupil Data

1. Scores from the Metropolitan Achievement Test selected as

indices of academic achievement included the full scale score on the Readiness Test, Listening, Reading, and Numbers on the Primer level, and the Total Reading and Total Mathematics scores for level Primary I and above. Analysis was based on percentile scores for the Readiness and Primer levels and on grade equivalents for all higher levels.

For the first year of the project, achievement test scores were not analyzed statistically but were compared to national norms. For the last two program years, the method of data analysis was based upon comparison of each child's expected gain with the actual gain from pre- to post-test. This latter approach allowed for assessing project results in a more realistic context since it would seem unreasonable to anticipate a one-month gain on the MAT for each month the special education child spends in school. Unlike the gain expected for the norm sample, the expected gain score is based on the number of months a child has been in school prior to the pre-test, the score on the pre-test, and the duration of project intervention. Then the actual post-test score can be compared statistically to the expected score in order to assess academic growth attributable to progam involvement. It is acknowledged that this method may be open to criticism since the assumption that one can validly predict future performance may not hold. However, in dealing with this special population a comparison of a learning disabled child who does not function at chronological age level with a norm sample of "typical" pupils appears equally or even more invalid.

For the MAT, actual post-test grade equivalents were compared to expected grade equivalents for level Primary I and above by t -tests. t - tests also were used to measure pre- to post-test change in percentile ranks for MAT Readiness and Primer levels and for the New York State Test in Reading and Mathematics.

2. Change in self-concept was measured by pre-to post-test change on the Lipsitt scale. A t - test for matched samples was conducted to determine whether or not the post-test scores on the Lipsitt scale were significantly higher than scores on the pre-test.

3. Change in the perception of the locus of control of reinforcements was measured by pre- to post-test change on the Bialer Locus of Control Scale for Children. Since it was assumed that one effect of Project Mainstream might be an increase in the child's belief in control over the environment, this measure was considered appropriate for evaluation of project success. t - tests for matched samples were conducted for each of two project years to ascertain whether or not post-test scores on the Bialer scale were significantly higher than scores on the pre-test.

4. The extent of social integration in a regular classroom for a small sample of mainstreamed children was assessed through the descriptive narrative provided by a "naive" observer.

5. Sociometric ratings were obtained for a sample of special education children who were mainstreamed for at least 50% of the school day and for their regular class peers. t - tests were conducted for each of the three years of the project to determine whether or not the ratings of mainstreamed children differed from the average indices of children in their respective regular classes.

B. Data From Teachers, Principals, and Administrators

1. Change in the degree of teachers' acceptance of the placement of mildly handicapped pupils in regular classrooms was measured by pre- to post-test change on the Rucker Gable Educational Programming

Scale. Data were analyzed using a t - test for matched samples.

2. Change in teachers', principals', and administrators' attitudes toward the concepts, Project Mainstream, Children with Learning Problems, Children with Social Problems, Special Education Classes, Behavior Modification, Parent, and Evaluation, was assessed through pre- to post-test differences on the Semantic Differential. Data were analyzed by t - tests.

3. Change in teachers' attitudes toward Project Mainstream over the last two program years was assessed by pre- to post-test change on Likert scales tapping attitudes toward Mainstreaming, Behavior Modification, and aspects of Project Mainstream Curriculum. Data were analyzed using t - tests for matched samples.

4. The responses of teachers filling out the Teacher Reaction Sheet were indicated as the percentage of the sample responding to each item.

5. The responses of principals and assistant principals returning the Principal Reaction Questionnaire were recorded as the percentage of respondents providing a rating for each item.

6. The responses of special education administrators completing the Administrator Reaction Questionnaire were recorded as the number of administrators responding to each item.

7. Results from end-of-year interviews with administrators were presented in narrative form.

C. Parent Data

The results of questionnaires for the three years of project operation were reported as the percentage of parents responding to each item.

D. Follow-Up Data

The questionnaire responses of principals and special education teachers participating in the first two years of the project were summarized and presented in narrative form.

Findings

Findings for the three years of project operation are summarized below. Again, it should be stressed that the selection of an appropriate comparison group for the mainstreamed participants was not feasible. This factor should be kept in mind when interpretating the results from this evaluation.

A. Pupil Data

1. Mean scores on the Metropolitan Achievement Test for the three years of the project are presented in Tables 1 through 3. Sample sizes may vary within levels of this test since some children were unable to complete all sections of the test. Growth was apparent at all levels and for all subtests of the MAT with the exception of Reading on the Elementary level in 1973-1974. It should be noted, however, that the standard deviations of all of these scores are quite large, reflecting the considerable heterogeneity in performance of this group of children.

For the last two years of the project, analyses of levels Readiness and Primer on the MAT and the New York State Test were conducted by comparing pre- to post-test change in percentile rank. For MAT levels Primary I and above, analyses were conducted comparing the actual gains made by participants with their expected gains (see Tables 4 - 16). In 1974-1975, children's percentile ranks on the

Readiness and Primer levels were significantly higher at the post-test period, and actual scores on the post-test were significantly higher than expected scores for the Reading and Mathematics subtests on the Primary I and Primary II levels and for Mathematics on the Elementary level. All other actual post-test scores were higher than expected scores although these differences were not significant.

In 1975-1976, scores on the Readiness level only were significantly greater at the post-test than at the pre-test period. For all other tests, however, post-test means were higher than either their respective pre-test means or expected post-test means, although these scores did not show significant differences.

2. Self-Concept. The difference between pre- and post-test means on the Lipsitt Self-Concept Scale was not significant (Table 17).

3. Locus of control. Differences between pre- and post-test means on the Bialer Locus of Control Scale for Children were not significant (Tables 18 and 19).

4. "Naive observer." The report on the adjustment of mainstreamed children in a regular classroom based upon the observations of a skilled, special education professional is presented in Appendix D. This observer was able to identify only two of the ten mainstreamed children seen within the context of a regular class and additionally, she mistakenly identified as a special education student a regular class child with academic deficits. Both of the correct choices were made on the basis of perceived deficits in academic ability and not on the basis of inadequate social adjustment.

5. Sociometric ratings. For the first two years of the project, the differences between means for special education and regular class children were not significant (Tables 20 and 21). In 1975-1976, regular class children were, on the average, found to be more "popular" with their classmates than special education children (Table 22).

B. Data From Teachers, Principals, and Administrators

1. Rucker-Gable Educational Programming Scale. A comparison of pre- and post-test means on this instrument revealed that there was no difference between teachers' scores for the two test periods (Table 23).

2. Semantic Differential. Two analyses were conducted using this instrument; pre- and post-test scores were compared for subjects who returned both pre- and post-test, and comparisons were made of pre- and post-test scores for all subjects responding at either or both test periods. No significant differences were found between pre- and post-test means for any of the concepts measured for either the restricted or the total sample (Table 24).

3. Teacher Attitude Scale. Significant pre- to post-test change was found for the mainstreaming subscale for participants in 1974-1975 (Tables 25 and 26).

4. Teacher Reaction Sheet. Responses to thic instrument are given in Table 27. An overwhelming majority of the respondents rated Project Mainstream as "very" or "somewhat helpful" in the individualization of instruction, remediating the atypical child, math, reading, classroom management, and the use of materials. In each of the three years, the most positive response was noted for the area, remediating the atypical child. Areas found to be relatively less useful for teachers were the skill areas of reading and mathematics.

For the last two years, over 80 per cent of the teachers rated the project consultants as "very effective." None of the respondents

considered the consultants to be "ineffective." (This question was not asked in 1973-1974).

5. Principal Reaction Questionnaire. Principals' reponses over the three years of the project are presented in Table 28. These responses reflect overall favorable evaluations of the project with the greatest frequency of "most effective" ratings in the first two years given for the improvement of teachers' skills, and in the final project year for improving the skills of both teachers and special education children.

For each of the three years, over 60% of the principals expressed their intentions to continue mainstreaming after project funding would cease. In the first and third years (the question was not asked in the second year), approximately one-fourth and one-third of the respondents, respectively, indicated that the special education teacher would remain in the role of teacher of a self-contained class rather than function as a consultant without a specific class assignment.

For all three years, all of the respondents felt that the greatest strength of Project Mainstream was in "improving teachers' attitudes." Also highly rated were project personnel, "improving teachers' and childrens' skills;" and individualization of instruction. Relatively lower ratings were given to the project's role in involving parents.

There were few specific indicators of perceived project weaknesses and a number of respondents felt that there were "no major weaknesses" in Project Mainstream.

6. Administrator Reaction Questionnaire. The responses of the four administrators returning the questionnaire are presented in Table 29. Responses were generally positive. Some of the following issues were raised in written comments: in one district, mainstreaming could not be continued because no funds had been allotted for the project; one administrator criticized the selection of schools for the first year of the project; and, the selection of some participating teachers was considered inappropriate.

7. Administrator Interviews. The administrators were found to hold favorable attitudes toward the accomplishments of the project at the end of the second year and expressed great praise for project staff. In general, the second year of the project was considered more successful than the first year because of better selection of schools. Commitment to continuation varied and appeared most pronounced in the non-BOCES (Bureau of Cooperating Educational Services) components.

C. Parent Data

Responses of parents to the evaluation questionnaire for the three years of the project are reported in Tables 30 -32. For each year, the return rate for this group was extremely low (between 30 and 40 respondents). Therefore, responses should not be considered representative of all parents whose children participated in Project Mainstream.

For the first two years, in contrast to the final year, a greater number of parents appeared to know that their children were involved in the project. In 1973-1974, a majority of the respondents indicated that they had attended parent workshops in their children's schools; in the last two years, fewer than half of the respondents noted that they had attended these workshops.

A majority of the parents acknowledged positive changes in their children over the program year in the areas of reading and mathematics

achievement, behavior, attitudes toward school, and physical coordination. Greater change was noted in academic subjects than in other areas.

In general, parents expressed beliefs that their children did not find it difficult to move from one class to another, and that school work was harder in the regular than in the special education classes. Parents differed in their opinions of children's preference for special education versus regular classes, and of the extent of children's friendships in the two types of classes.

D. Follow-Up Data

Questionnaire responses from those principals and special education teachers participating in the first two years of Project Mainstream revealed that by 1975-1976 children were still being mainstreamed in 16 of the 19 project schools having a special education program. Failure to continue mainstreaming or a decrease in mainstreaming primarily was attributable to loss of the special education BOCES class or change of the special education class to children functioning on too low a level for introduction to a regular class. The amount of time mainstreamed children spent in regular classes had increased for some pupils but had decreased for others. In most of the schools polled, children were being mainstreamed into classes of some teachers who were not exposed to training by project staff. Respondents pointed out some difficulties encountered when mainstreaming pupils into classes of untrained teachers or in mainstreaming without the assistance of the Project Mainstream consultant.

Referrals to special education classes had decreased or remained the same in some schools but had increased in others. An increase in referrals was sometimes described as a positive result of the program in that it reflected a greater sensitivity to perceived learning disabilities. Special education teachers revealed that the degree of academic and social adjustment of mainstreamed children in regular classrooms ranged from outstanding to poor. Several factors apparently contributing to successful integration were noted, including the age of the child, and the similarity of the special education child to regular class children in academic and social skills.

Although principals offered varied responses to a question requiring a statement of their expectations from the project, 15 of the 19 principals responding felt that their expectations had been met. In some schools, changes had occurred which affected the degree of satisfaction with and the extent of continuation of the program, e.g., changes in staff and transfer of the BOCES class from the school. A majority of principals and special education teachers also felt that it would have been desirable for the project to have reached more staff members in their schools.

All of the special education teachers indicated that they used a variety of training techniques recommended by project consultants, although they noted that they had used these techniques with greater frequency during the year of project involvement. Furthermore, in most of the former project schools, Project Mainstream materials were still in use as a shared resource by the teaching staff. In general, formal meetings among the teachers involved in mainstreaming had been discontinued. However, in several schools informal contacts were maintained. Half of the teachers responding indicated that their roles had changed as a result of Project Mainstream, with most accepting responsibility as resource teachers for regular as well as special education children.

A majority of the principals (15 out of 19) noted that they were unable to continue teacher training according to the Project Mainstream model primarily due to lack of funding and inadequate personnel.

Only a few of the principals and special education teachers questioned had noticed any change in the involvement of special education parents as a result of the school's participation in the program.

Conclusions and Recommendations

Outcomes

A. Pupil Data

Although achievement gain was not found to be significant for all subtests of the Metropolitan Achievement Test or for the New York State Test, academic growth over the duration of the project was considerable in many instances and in general, was greater than would be expected based upon these students' prior performance. This demonstration of cognitive growth by a sample of "special" children thus should be viewed as lending credibility to the assumptions underlying mainstreaming even though definitive statements of results cannot be made in the absence of a comparison group.

The failure to find change in self-concept is not surprising as the children experienced difficulty completing the Lipsitt scale. There is no clear explanation, however, for the failure to find a significant increase in belief in internal control on the Bialer scale. It may be that there was no effect on this personality dimension from project intervention or that an increase in "internality" would appear only at a later time.

Indices of the social integration of mainstreamed children were obtained through observation and by sociometric ratings. The "naive" observer's report suggests that, at least on the basis of this small sample, mainstreamed children can enter the regular classroom social structure with relative ease. Further, in the first two years of the project, it was found that mainstreamed special education children were sufficiently well-integrated into regular classrooms to obtain sociometric ratings similar to those obtained by their non-special education peers. In the third year, while the differences between mainstreamed and regular class children were significant, the average rating given to mainstreamed pupils (61% of the class expressed liking for these students) as compared to 71% for regular class children suggests considerable social integration within a regular class setting.

B. Data From Teachers, Principals, and Administrators

Although pre- to post-test change on the Rucker-Gable Educational Programming Scale was not significant, the magnitude of the scores obtained at the pre-test period suggests that early in the project year, teachers who participated in the program were more or less accepting of a model similar to that proposed by Project Mainstream. At the post-test period, the sample showed a similar degree of acceptance of this model. Similarly, on the Semantic Differential participants appeared to accept the concept of mainstreaming at both pre- and post-test periods. On the Likert scale, attitudes toward mainstreaming did increase significantly from pre- to post-test period.

Results from the Teacher Reaction Sheet indicate that teachers found project intervention "very" or "somewhat helpful" in all skill areas covered by project staff. The project consultants were well received by teachers and their assistance was rated as "very effective" by over 80% of the sample

Principals also provided generally favorable reactions to project intervention, with the greatest frequency of high ratings given to the project's role in improving teachers' attitudes and skills. A majority of the principals appeared committed to program continuation following withdrawal of Project Mainstream from their schools.

Results from questionnaires and interviews with special education administrators revealed favorable attitudes toward the project and the expression of praise for project staff. The second year of the project was perceived to have been more successful than the first. Commitment to continuation appeared most pronounced in the non-BOCES components.

C. Parent Data

Parents expressed generally favorable attitudes toward the experiences of their children during the year of the project. These responses, however, cannot be considered representative since the return rate for the parent group was quite low. Furthermore, a number of parents who did respond did not know that their children were involved in Project Mainstream. The poor response to the evaluation questionnaire and the unfamiliarity of many of the parents with the program suggest that parent involvement was the weakest area of program intervention.

D. Follow-Up Data

Questionnaire responses (taken both from mailed questionnaires and interviews) from principals and teachers participating in the first two years of the project indicated that some aspects of Project Mainstream had been incorporated into all of the laboratory schools. Considerable obstacles to continuation were identified and greater clarification was provided of factors facilitating successful mainstreaming.

Comparisons of follow-up data for the first and second years of the project do not appear meaningful. Although it seems that the process of selecting schools for participation was superior in the second year of the project (e.g., more committed staff, children more "ready" for mainstreaming), other external factors such as staff cutbacks and change in the BOCES class resulted in similar circumstances for all participating schools. Data collected for the three years and summarized in this report, e.g., achievement test scores and teachers' attitudes, also do not lend themselves to valid comparison. Overall, data for the three years show greater similarities than differences among the schools involved in Project Mainstream and suggest a consistency in the implementation of the program.

Recommendations

1) Schools should be selected for participation in mainstreaming with regard to: the ages and levels of functioning of the pupils to be mainstreamed; the extent of mainstreaming prior to program intervention; the probability that the children and staff involved in the program will remain in the school for the following year; the degree of interest in and commitment to mainstreaming expressed by the principal and participating teachers; and, the potential of the special education teacher for making the transition from working with a self-contained class to a resource room.

2) Since the existence of cooperative relationships between special education and regular class teachers and between teachers and principals are essential to successful mainstreaming, a focus on the improvement of communication skills should be an integral part of consultants' on-site training.

3) Since it appears likely that after one year of program intervention children will be mainstreamed into classes of teachers not exposed to project training, districts replicating the basic Project Mainstream model should experiment with variations which would involve a greater number of school staff members, e.g., consultants might spend more time in fewer schools or the project could be extended beyond one year.

4) Even though most mainstreamed children seem to be accepted by regular classmates, both parents and teachers acknowledge that special education children frequently are expected to be "different" from other children. In order to facilitate the social integration of mainstreamed children, project staff should assist teachers and regular class students in effecting positive attitude change.

5) There were several indications of low parent involvement in the mainstreaming process. It is recommended that greater emphasis be placed upon the encouragement of parent participation through school "open house" conferences and meetings held at times when parents are most likely to attend.

6) All former project schools expressed a great need for ongoing program assistance. It is recommended that any district replicating the Project Mainstream design insure continuation through future allocation of staff and/or funds to participating schools.

Requirements for Successful Implementation

Requirements for successful implementation of the Project Mainstream design include the following:

1) a teaching staff and principal strongly committed to the concept of mainstreaming;

2) opportunity for teachers to receive training in the application of behavioral principles in the classroom;

3) positive, cooperative relationships among teachers and between teachers and the principal;

4) anticipated stability of staff and children in the special education class;

5) special education children who possess academic and social skills nearly comparable to the skills of a substantial percentage of children in the "receiving" regular classrooms;

6) special education children who are close in chronological age to the children in "receiving" regular classrooms;

7) clear plans for program continuation after formal contact with the project has terminated; and,

8) no serious budgetary constraints which would hinder the mainstreaming process.

References

Durost, W.N,, Bixler, H., Wrightstone, J.W., Prescott, G.A., and Balow, I.H. Metropolitan Achievement Tests. New York: Harcourt, Brace, Jovanovich, Inc, 1971.

Bialer, I. Conceptualization of success and failure in mentally retarded and normal children. Journal of Personality, 1961, 29, 303-320.

Lipsitt, L.P. A self-concept scale for children and its relationship to the Children's Form of the Manifest Anxiety Scale. Child Development, 1958, 29, 463-472.

Osgood, C.E., Suci, G.J., and Tannenbaum, P.H. The measurement of meaning. Urbana, Ill.: University of Illinois Press, 1971.

Rucker, C.N. and Gable, R.K. Rucker-Gable Educational Programming Scale. Storrs, Conn.: University of Connecticut, 1973.

Appendix A

Sociometric Rating Scale

Administration of the IDS Sociometric Rating Scale involves listing the name of each child in the classroom in alphabetical order (including the name of the child(ren) mainstreamed). A separate list is provided for each child in the class. Every child (both mainstreamed and regular class children) is interviewed individually and is given the following instructions:

> We have come here today to find out how well boys and girls your age can work together in groups. I have here a list of every child in your class. I will read you each name, and for each child you tell me whether or not you like him or her.

The tester then reads the names on the class list (excluding the name of the child being tested) one by one and pauses after each for the child's response. For each name read, the tester makes a mark to indicate whether or not the child named has been designated as liked or disliked.

All class lists are then collected and tallies are made of the number of times each child listed was rated as "liked" or "disliked." The score, or "popularity index" for each child is the number resulting from dividing the number of times the child was selected as "liked" by the total number of ratings made. For example, child X is rated either positively or negatively by 20 of his/her classmates. Of these 20, 15 children indicate that they "like" child X while 5 indicate that they "do not like" child X. The score or index for child X is thus 15 divided by 20 or .75 (this score could also be interpreted as "child X is liked by 75% of the class). The final score for each mainstreamed child is his/her "popularity index." The class score, or average sociometric score, is the mean index obtained for all regular class students excluding the child(ren) mainstreamed. While it is acknowledged that this method of assessment provides only a very general description of a child's status in his/her peer group, it does offer a very useful picture of the extent to which the mainstreamed child faces acceptance or rejection from classmates.

Appendix B

PROJECT MAINSTREAM

Smooth	_____	_____	_____	_____	_____	_____	_____	Rough
Weak	_____	_____	_____	_____	_____	_____	_____	Strong
Important	_____	_____	_____	_____	_____	_____	_____	Unimportant
Worthless	_____	_____	_____	_____	_____	_____	_____	Valuable
Active	_____	_____	_____	_____	_____	_____	_____	Passive
Sick	_____	_____	_____	_____	_____	_____	_____	Healthy
Positive	_____	_____	_____	_____	_____	_____	_____	Negative
Low	_____	_____	_____	_____	_____	_____	_____	High
Successful	_____	_____	_____	_____	_____	_____	_____	Unsuccessful
Hard	_____	_____	_____	_____	_____	_____	_____	Easy
Light	_____	_____	_____	_____	_____	_____	_____	Heavy
Slow	_____	_____	_____	_____	_____	_____	_____	Fast
Happy	_____	_____	_____	_____	_____	_____	_____	Sad
Small	_____	_____	_____	_____	_____	_____	_____	Large
Good	_____	_____	_____	_____	_____	_____	_____	Bad
Complex	_____	_____	_____	_____	_____	_____	_____	Simple
Calm	_____	_____	_____	_____	_____	_____	_____	Nervous
Closed	_____	_____	_____	_____	_____	_____	_____	Open
Useful	_____	_____	_____	_____	_____	_____	_____	Useless

Appendix C

Opinion Survey

The statements given below reflect a number of different opinions and viewpoints related to Project Mainstream. Some of the statements may represent conflicting and opposing points of view. You will find yourself agreeing strongly with some of the statements, disagreeing just as strongly with others, and agreeing and disagreeing less strongly with still others. Please indicate what your opinion is about each of the statements by using the following scale:

Agree strongly:	+3	Disagree strongly:	-3
Agree moderately:	+2	Disagree moderately:	-2
Agree slightly:	+1	Disagree slightly:	-1

For example, if you agree very strongly with a statement, write a +3 on the line preceding the statement. If you should happen to disagree slightly with it, write a -1 on the line in front of it. Please respond to all of the statements. Read each statement and consider your answer carefully, but do not spend too much time on any one statement. Try to answer as best you can and then go on.

_____ 1. It is sad but true that a special education child will tend to "stand out" among regular class children.

_____ 2. If children in special education classes were to be re-evaluated, it might be found that many should be placed in regular classes.

_____ 3. Most mainstreamed children probably will not be able to work independently in a regular classroom setting.

_____ 4. Although they can probably make some social adjustment to a regular class, special education children can never expect to be really well-liked by their non-special education peers.

_____ 5. It is probably true that most special education children would prefer to be placed into a regular classroom.

_____ 6. The advantages of graphing behaviors and taking reliability in the application of Behavior Modification techniques far outweigh the sometimes great amount of time required.

_____ 7. After one year of exposure to Project Mainstream, most participating teachers should be able to properly apply Behavior Modification techniques in their classrooms.

_____ 8. A major problem in mainstreaming may be that the mainstreamed child will require too much of the regular class teacher's time.

_____ 9. It is unrealistic to expect regular classroom teachers to successfully deal with the problems presented by special education children.

_____ 10. Understanding Behavior Modification is so difficult that most teachers probably will not be able to apply the techniques properly.

_____ 11. It is probably not fair to regular class students to mainstream a special education child into academic subjects since the mainstreamed child may slow down the rest of the class.

_____ 12. Children with learning disabilities may be better off in special education classes since there are fewer children and more time can be devoted to each child.

_____ 13. A written "contract" or agreement between a teacher and a child is an important step in a plan to improve the child's behavior or performance.

_____ 14. Placement in segregated, special education classes probably contributes to negative self-concept in children.

_____ 15. It would really be an injustice to special education children if teachers stopped treating them as "different" from other children.

_____ 16. Placing a special education child in a regular class setting could cause him/her considerable social damage.

_____ 17. Mainstreaming into non-academic subjects may be feasible. However, academic subjects in a regular class will probably be too difficult for a mainstreamed child to handle.

_____ 18. Children diagnosed as "learning disabled" probably present greater behavioral problems than do "typical" children in a regular classroom.

_____ 19. Many special education children may have been labeled inaccurately and do not really belong in special classes at all.

_____ 20. There are probably children in regular classes who would be diagnosed as candidates for special education.

_____ 21. Behavior Modification probably is effective for short-term remediation of negative behaviors but not for long-term problem solving.

_____ 22. Behavior Modification techniques are as applicable to the behaviors of regular class children as to the behaviors of children in special education classes.

_____ 23. Behavior Modification techniques may be helpful in remediating behaviors of the "atypical" child. However, more conventional approaches are best used with "typical" children.

_____ 24. Both special education and regular class teachers should receive adequate training before beginning to mainstream children.

_____ 25. Most children in special education classes would probably be happier in a regular class setting.

_____ 26. Special education teachers can be very helpful as resource consultants to regular class teachers.

_____ 27. Behavior Modification techniques are as useful for remediating academic difficulties as for negative social behaviors.

_____ 28. The anxiety felt by mainstreamed children when placed with regular classroom students is probably minimal compared to the potential benefits of mainstreaming.

_____ 29. It is unrealistic to expect considerable academic growth in a special education child after only one year of mainstreaming.

_____ 30. Although mainstreaming is a good idea in theory, it probably is not really practical for most special education children.

_____ 31. Most regular classroom settings can provide the kind of support needed by most special education children.

_____ 32. The application of Behavior Modification techniques tends to allow teachers too much control over students' behaviors.

Appendix

Report from "Naive" Observer

A second index of the classroom integration of mainstreamed children was obtained through the report of a "naive" observer who assessed the extent to which mainstreamed children could be differentiated from their non-Special Education classmates. This observer was "naive" in that although highly trained in Special Education, she neither had prior contact with any of the children observed nor was given any information concerning them. The observer was sent to four regular classrooms in two separate schools and was asked to note any manifestation of behavior either by a child or toward a child which appeared to differentiate a Special Education pupil from his/her non-Special Education classmates. Observation periods lasted from 30 to 45 minutes. All of the children in this sample had been mainstreamed over a considerable portion of the school year for at least 70% of the school day. The results of these observations, summarized by the observer, are given below.

> On May 31, 1974 I visited two classes in (name of school). In the role of naive observer I tried to pick out those children mainstreamed into those classes from Special Education classes.
>
> I was unable to pick out any of the four Special Education children in (name of teacher)'s class. One boy in the program left the room just as I came in. It was later explained that he could not yet handle strangers in the classroom. It is obvious that the programming provided for these occasions. The boy knew where he could go and was able to stay in control of the situation.
>
> (Name of teacher)'s class were completing their morning assignments when I visited them. While I was able to pick out (name of Special Education child) as a slightly

language-handicapped child, I was not able to designate him as a child in this project (Note: there were two additional Special Education children in this class who were not identified by the observer.)

On Monday, June 3, I visited two classes in (name of school). In one, I was able to pick out (child A) and (child B) as two learning disabled youngsters. (Note: Child B is the only project child in that class.) I was in a position to hear the children read and then to watch as they completed their reading assignments. There was no observable behavior on the part of the other children that pointed to (child B) as a special child. (Child B) seemed happy and well integrated in the class.

In the other class, I was not able to distinguish the Special Education children.

In both schools I allowed myself a few extra minutes of observation after the children had been pointed out to me (Note: the children were identified by the teacher after the observation period) to see if there were any cues I might have picked up. There were none.

The observer was able to identify only two of the ten mainstreamed students observed in a regular class as project children. Additionally, one child who was not a Special Education child was mistakenly identified. Both correct choices were made on the basis of perceived deficits in ability. One child was described as "slightly language-handicapped," while the other was identified by performance in a reading group.

There was no evidence that the Special Education children faced any difficulty in interacting with other children. In fact, one child identified was said to be, "happy and well integrated in the class." Further, the observer noted that even after the children had been pointed out by the teacher, there were no apparent "cues" that might have led to identi-

fication. This report, in conjunction with the results of the Sociometric Rating Scale, thus clearly suggests that mainstreamed children can move into the classroom social structure with relative ease.

TABLE 1

METROPOLITAN ACHIEVEMENT TEST
MEAN PRE- TO POST-TEST CHANGE
1973-1974

	Readiness
$\bar{X}$	13% [a,b]
S.D.	17.81
N	12

	Primer		
	Listening	Reading	Numbers
$\bar{X}$	10%	16%	12%
S.D.	16.47	28.83	18.04
N	24	24	25

	Primary I			
	Word Knowledge	Word Analysis	Reading	Math
$\bar{X}$	.35[c]	.35	.45	.48
S.D.	.50	.58	.59	.72
N	29	29	28	25

	Primary II			
	Word Knowledge	Word Analysis	Reading	Spelling
$\bar{X}$	.25	.24	.52	.11
S.D.	.56	.73	.52	.37
N	12	12	11	11

	Primary II		
	Math Computation	Math Concepts	Math Prob. Solv.
$\bar{X}$	.62	.62	.56
S.D.	.72	.87	.92
N	14	13	12

	Elementary			
	Word Knowledge	Reading	Language	Spelling
$\bar{X}$	.06	- .46	.84	.36
S.D.	1.02	1.19	.83	1.01
N	5	5	5	5

	Elementary		
	Math Computation	Math Concepts	Math Prob. Solv.
$\bar{X}$	.38	.93	1.17
S.D.	.65	1.10	1.49
N	7	7	7

[a] all scores represent increases from pre- to post-test unless preceded by a minus sign

[b] a mean of 13% represents a pre- to post-test increase of 13 percentile points

[c] a mean of .35 represents a pre- to post-test increase of 3½ months or .35 years on a grade equivalent scale based on a 10-month year

TABLE 2

METROPOLITAN ACHIEVEMENT TEST
MEAN PRE- TO POST-TEST CHANGE
1974-1975

	Readiness
Mean	19.44% [a]
S.D.	20.01
N	9

	Primer		
	Listening	Reading	Numbers
Mean	29.07	23.71%	37.75%
S.D.	12.46	16.23	20.69
N	14	14	8

	Primary I	
	Total Reading	Total Math
Mean	.38[b]	.63
S.D.	.39	.60
N	33	27

	Primary II	
	Total Reading	Total Math
Mean	.61	.60
S.D.	.96	.63
N	40	37

	Elementary	
	Total Reading	Total Math
Mean	.41	.64
S.D.	.77	.99
N	30	46

	Intermediate	
	Total Reading	Total Math
Mean	.46	.39
S.D.	.74	.82
N	25	20

[a] a mean of 19.44% represents a pre- to post-test increase of 19.44 percentile points

[b] a mean of .38 represents a pre- to post-test increase of 3 8/10 months or .38 years on a grade equivalent scale based on a 10-month year

TABLE 3

METROPOLITAN ACHIEVEMENT TEST
MEAN PRE- TO POST-TEST CHANGE

1975 - 1976

	Readiness
Mean	21.85%[a]
N	13

	Primer		
	Listening	Reading	Numbers
Mean	15.93%	13.80%	14.00%
N	15	15	14

	Primary I	
	Total Reading	Total Math
Mean	.21[b]	.42
N	38	27

	Primary II	
	Total Reading	Total Math
Mean	.41	.64
N	20	17

	Elementary	
	Total Reading	Total Math
Mean	.43	.64
N	10	18

	Intermediate	
	Total Reading	Total Math
Mean	.50	1.55
N	4	2

[a] a mean of 21.85% represents a pre- to post-test increase of 21.85 percentile points.

[b] a mean of .21 represents a pre- to post-test increase of 2 1/10 months or .21 years on a grade equivalent scale based on a 10 month year.

TABLE 4

DIFFERENCES BETWEEN MEAN PRE- AND POST-TEST PERCENTILE RANKS ON THE MAT, READINESS LEVEL

1974 - 1975

MAT Readiness Level	Mean	N	t
Pre-test Rank	59.56	9	2.91**
Post-test Rank	79.00		

**p <.01, two-tailed test

TABLE 5

DIFFERENCES BETWEEN MEAN PRE- AND POST-TEST PERCENTILE RANKS ON THE MAT, READINESS LEVEL

1975 - 1976

MAT Readiness Level	Mean	N	t
Pre-test Rank	38.69	13	2.72*
Post-test Rank	60.54		

* p < .05 two-tailed test

TABLE 6

DIFFERENCES BETWEEN MEAN PRE- AND POST-TEST PERCENTILE RANKS ON THE MAT, PRIMER LEVEL

1974 - 1975

MAT, Primer Subtest	Pre-test Mean	Post-test Mean	N	t
Listening	38.07	67.14	14	8.73**
Reading	52.00	75.71	14	5.46**
Numbers	33.62	71.38	8	5.16**

**p < .01, two-tailed test

TABLE 7

DIFFERENCES BETWEEN MEAN PRE- AND POST-TEST PERCENTILE RANKS ON THE MAT, PRIMER LEVEL

1975 - 1976

MAT, Primer Subtest	Pre-test Mean	Post-test Mean	N	t
Listening	48.27	64.20	15	1.99
Reading	55.93	69.73	15	1.67
Numbers	51.79	65.79	14	1.32

TABLE 8

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, PRIMARY I LEVEL

1974 - 1975

MAT, Primary I Subtest	Mean Expected[a]	Mean Actual	N	t
Total Reading	2.21	2.42	33	2.99**
Total Mathematics	2.02	2.50	27	3.97**

[a]Scores are reported in grade equivalent units

** $p < .01$, two-tailed test

TABLE 9

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, PRIMARY I LEVEL

1975 - 1976

MAT, Primary I Subtest	Mean Expected	Mean Actual	N	t
Total Reading	2.57	2.64	38	.44
Total Mathematics	2.61	2.88	27	1.57

TABLE 10

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, PRIMARY II LEVEL

1974 - 1975

MAT, Primary II Subtest	Mean Expected	Mean Actual	N	t
Total Reading	3.10	3.48	39	2.53*
Total Mathematics	2.95	3.34	36	3.94**

* $p < .05$, two-tailed test

** $p < .01$, two-tailed test

TABLE 11

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, PRIMARY II LEVEL

1975 - 1976

MAT, Primary II Subtest	Mean Expected	Mean Actual	N	t
Total Reading	2.65	2.95	20	1.43
Total Mathematics	3.12	3.61	17	1.70

TABLE 12

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, ELEMENTARY LEVEL

1974 - 1975

MAT, Elementary Subtest	Mean Expected	Mean Actual	N	t
Total Reading	4.05	4.15	30	.71
Total Mathematics	3.97	4.31	44	2.27*

* $p < .05$, two-tailed test

TABLE 13

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, ELEMENTARY LEVEL

1975 - 1976

MAT, Elementary Subtest	Mean Expected	Mean Actual	N	t
Total Reading	3.48	3.75	10	.58
Total Mathematics	3.90	4.35	18	1.87

TABLE 14

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, INTERMEDIATE LEVEL

1974 - 1975

MAT, Intermediate Subtest	Mean Expected	Mean Actual	N	t
Total Reading	6.01	6.10	25	.60
Total Mathematics	5.65	5.72	20	.33

TABLE 15

DIFFERENCES BETWEEN MEAN EXPECTED AND ACTUAL POST-TEST SCORES ON THE MAT, INTERMEDIATE LEVEL

1975 - 1976

MAT, Intermediate Subtest	Mean Expected	Mean Actual	N	t
Total Reading	4.52	4.80	4	.47
Total Mathematics	4.90	6.20	2	.91

TABLE 16

DIFFERENCES BETWEEN MEAN PRE- AND POST-TEST PERCENTILE RANKS ON THE NEW YORK STATE TEST

1975 - 1976

New York State Test	Pre-test Mean	Post-test Mean	N	t
Reading	35.88	49.71	17	1.97
Mathematics	48.44	53.50	16	.66

TABLE 17

PRE- AND POST-TEST MEANS AND STANDARD DEVIATIONS ON THE LIPSETT SELF CONCEPT SCALE (N = 83)

1973 - 1974

	Pre-test	Post-test	t
$\bar{X}$	83.88	86.42	N.S.
S.D.	13.13	11.10	

TABLE 18

DIFFERENCE BETWEEN MEAN PRE- AND POST-TEST
SCORES ON THE BIALER LOCUS OF CONTROL SCALE FOR CHILDREN

1974 - 1975

Bialer Score[a]	Mean	S.D.	N	t
Pre-test	13.60	2.71	120	.33
Post-test	13.51	2.66		

[a] A higher score reflects greater perception of internal control

TABLE 19

DIFFERENCE BETWEEN MEAN PRE- AND POST-TEST
SCORES ON THE BIALER LOCUS OF CONTROL SCALE FOR CHILDREN

1975 - 1976

Bialer Score	Mean	S.D.	N	t
Pre-test	13.28	2.62	64	.09
Post-test	13.23	2.99		

TABLE 20

DIFFERENCE BETWEEN MEAN SOCIOMETRIC INDICES
FOR MAINSTREAMED AND REGULAR CLASS CHILDREN

1973 - 1974

Group	N	Mean	S.D.	t
Special Education	19	.66	.22	1.16
Regular Class	19	.71	.08	

TABLE 21

DIFFERENCE BETWEEN MEAN SOCIOMETRIC INDICES
FOR MAINSTREAMED AND REGULAR CLASS CHILDREN

1974 - 1975

Group	N	Mean	S.D.	t
Special Education	8	.49	.23	1.53
Regular Class	8	.63	.11	

TABLE 22

DIFFERENCE BETWEEN MEAN SOCIOMETRIC INDICES
FOR MAINSTREAMED AND REGULAR CLASS CHILDREN

1975 - 1976

Group	N	Mean	S.D.	t
Special Education	11	.61	.16	2.13*
Regular Class	11	.71	.06	

* $p < .05$

TABLE 23

PRE- AND POST-TEST MEANS AND STANDARD DEVIATIONS
ON THE RUCKER-GABLE EDUCATIONAL PROGRAMMING SCALE
(N = 60)

1973 - 1974

	Pre-test	Post-test	t
$\overline{X}$	120.02	118.67	N.S.
S.D.	13.75	14.78	

TABLE 24

PRE- AND POST-TEST COMPARISONS OF EVALUATIVE SCALE SCORES ON THE SEMANTIC DIFFERENTIAL FOR TEACHERS, PRINCIPALS, AND ADMINISTRATORS
1973-1974

Concept	Project Mainstream		Children w/ Learning Problems	
	pre	post	pre	post
X	50.81[a](49.72)[b]	48.95 (48.82)	42.60 (43.18)	44.55 (44.14)
S.D.	4.85 (4.11)	8.33 (7.98)	7.67 (7.81)	7.62 (7.57)
Concept	**Children w/ Social Problems**		**Special Education Classes**	
	pre	post	pre	post
X	38.87 (39.35)	40.95 (40.46	45.55 (44.50)	45.76 (45.78)
S.D.	8.35 (8.67)	7.94 (8.67)	8.50 (8.43)	7.81 (8.30)
Concept	**Behavior Modification**		**Parent**	
	pre	post	pre	post
X	49.29 (48.33)	47.00 (47.86)	45.38 (44.34)	46.00 (44.98)
S.D.	5.04 (7.00)	10.27 (8.84)	7.08 (7.82)	8.08 (8.43)
Concept	**Evaluation**			
	pre	post		
X	46.79 (47.02)	46.37 (46.50)		
S.D.	10.02 (8.69)	9.27 (9.24)		

[a]numbers not in parentheses represent statistics for the sample returning both pre- and post-test (N = 38)
[b]numbers in parentheses represent statistics for the total sample completing the instrument (pre-test N = 54; post-test N = 56)

TABLE 25

DIFFERENCE BETWEEN PRE-AND POST-TEST MEANS ON THE SUBSCALES OF THE ATTITUDE QUESTIONNAIRE

1974 - 1975

Subscale	Pre-test[a] Mean	Post-test Mean	N	t
Mainstreaming	110.21	117.33	67	3.56**
Behavior Modification	48.37	49.34	67	1.49
Curriculum	19.12	19.25	67	.48

** $p < .01$, two-tailed test
[a] a higher score reflects a more favorable attitude

TABLE 26

DIFFERENCE BETWEEN PRE- AND POST-TEST MEANS ON THE SUBSCALES OF THE ATTITUDE QUESTIONNAIRE

1975 - 1976

Subscale	Pre-test Mean	Post-test Mean	N	t
Mainstreaming	102.58	104.64	50	.79
Behavior Modification	48.78	49.54	50	.34
Curriculum	20.38	19.18	50	.71

TABLE 27

Teacher Reaction Sheet Responses

1973 - 1976

Do you feel that Project Mainstream has been helpful in adding to your skills in the following areas:

Rating	1973 - 1974	1974 - 1975	1975 - 1976
Individualization of Instruction			
Very helpful	36%	55%	30%
Somewhat helpful	49%	41%	65%
Not helpful	15%	4%	4%
Remediating the Atypical Child			
Very helpful	57%	61%	47%
Somewhat helpful	43%	36%	47%
Not helpful		3%	6%
Math			
Very helpful	29%	47%	21%
Somewhat helpful	47%	51%	50%
Not helpful	24%	2%	29%

Note: Percentages are based on the number of teachers providing an assessment, i.e., the "not appropriate" category and "no answers" or blanks are omitted.

Table 27 (Continued)

Rating	1973 - 1974	1974 - 1975	1975 - 1976
Classroom Management			
Very helpful	42%	59%	36%
Somewhat helpful	44%	35%	60%
Not helpful	13%	6%	4%
Reading			
Very helpful	48%	46%	16%
Somewhat helpful	39%	46%	68%
Not helpful	13%	8%	16%
Use of Materials			
Very helpful	not	59%	36%
Somewhat helpful	asked	38%	50%
Not helpful	-----	3%	14%
How would you rate the effectiveness of the Project Consultant's assistance to your school?			
Project Consultant was very effective	not	84%	80%
Project Consultant was somewhat effective	asked	16%	20%
Project Consultant was not very effective	-----		

TABLE 28

Principal Reaction Questionnaire

1973 - 1976

Rating	1973 - 1974	1974 - 1975	1975 - 1976
How effective has Project Mainstream been in improving the skills of your teachers?			
Very effective; most or all teachers involved showed an increase in skills	75%	78%	46%
Somewhat effective; some teachers involved showed an increase in skills	25%	22%	54%
Not very effective; a few teachers involved showed an increase in skills although most did not			
Ineffective; no change was noted in teachers' skills			
How effective has Project Mainstream been in improving the skills of children in your Special Education class?			
Very effective; most or all children showed an increase in skills	50%	67%	46%
Somewhat effective; some children showed an increase in skills	38%	22%	31%
Not very effective; a few children showed an increase in skills although most did not			8%
Ineffective; no change was noted in children's skills			
Other: "Too premature to answer"	12%		
"No Special Education Class"		11%	
Not applicable			15%

Note: Ratings are given as the percentage of responses to each item.

Rating	1973 - 1974	1975 - 1975	1975 - 1976
How effective has Project Mainstream been in improving the skills of children in participating regular school classrooms?			
Very effective; most or all children showed an increase in skills	38%	11%	8%
Somewhat effective; some children showed an increase in skills	50%	78%	77%
Not very effective; a few children showed an increase in skills although most did not		11%	8%
Ineffective; no change was noted in children's skills			
Other: "Too premature to answer"	12%		
Not applicable			8%
Do you plan to continue mainstreaming in your school next year?			
Yes	63%	67%	69%
No	25%		
Don't know	12%	33%	15%
Not applicable			15%
How do you plan to use your Special Education teacher next year?			
Teacher of a self-contained class	25%	Question not included	31%
Resource teacher for mainstreamed special education children only			38%
Resource teacher for regular and mainstreamed students	63%		31%
Other: "Resource teacher for regular class teachers in need of special advice and instruction			8%
Not applicable	12%		15%

Rating	1973 - 1974	1974 - 1975	1975 - 1976
What do you feel have been the major strengths of Project Mainstream?			
Project personnel	50%	not included	77%
Improving teachers' skills	75%	89%	77%
Improving teachers' attitudes	100%	100%	100%
Improving children's skills	75%	89%	54%
Involvement of parents	50%	56%	54%
Involvement of teachers in regular classes with techniques of individualizing instruction	62%	78%	77%
Other: "Involvement of principals"	25%		
"Overall it has helped all teachers become more attuned to the needs and characteristics of special students"			
Project consultants		44%	
Materials			
Team work			
Goal setting			
What do you feel have been the major weaknesses of Project Mainstream?			
Teachers' resistance to the program	12%		
Parents' resistance to the program	12%		
Special education children not well prepared for mainstreaming	12%		8%
Teachers not well prepared for mainstreaming			8%
No major weaknesses	38%	56%	77%

TABLE 29

Administrator Reaction Questionnaire

1973 - 1974

Rating	No. Administrators Responding[a]
How effective has Project Mainstream been in improving the skills of teachers in your district?	
Very effective; most or all teachers involved showed an increase in skills.	3
Somewhat effective; some teachers involved showed an increase in skills.	1
Not very effective; a few teachers involved showed an increase in skills although most did not.	
Ineffective; no change was noted in teachers' skills.	
How effective has Project Mainstream been in improving the skills of children in Special Education classes in your district?	
Very effective; most or all children showed an increase in skills.	3
Somewhat effective; some children showed an increase in skills.	1
Not very effective; a few children showed an increase in skills although most did not.	
Ineffective; no change was noted in children's skills.	
How effective has Project Mainstream been in improving the skills of children in participating regular classrooms in your district?	
Very effective; most or all children showed an increase in skills.	
Somewhat effective; some children showed an increase in skills.	4
Not very effective; some children showed an increase in skills although most did not.	
Ineffective; no change was noted in children's skills.	
Do you plan to continue mainstreaming according to the Project Mainstream model in your district next year?	
Yes	3
No	1

[a] Note: Results are presented in terms of number of persons responding. Since sample is very small, comments given in response to open-ended questions are offered verbatim rather than in summary.

Table 29 (Continued)

Rating	No. Administrators Responding
What do you feel have been the major strengths of Project Mainstream?	
Project personnel	4
Improving teachers' skills	4
Improving teachers' attitudes	4
Improving children's skills	4
Involvement of parents	3
Involvement of principals	4
Involvement of teachers in regular classes with techniques of individualizing instruction	4
Other: "Improving child's self concept about his personal worth."	1
What do you feel have been the major problems facing Project Mainstream?	
Teachers' resistance to the program	1
Parents' resistance to the program	
Principals' resistance to the program	
Special Education children not well prepared for Mainstreaming	1
Teachers not well prepared for Mainstreaming	1
No major problems	2
Other: "Continuing funding for more than one year."	
"Major problems were made in less than satisfactory selection procedures of pilot schools and special education teachers."	
Has Project Mainstream had any impact on your overall Special Education Program?	
"Not yet. - as only one special class has been involved - it has had an impact on the special ed. teachers in the district, as it encourages teachers to consider mainstreaming."	
"The project has had a remarkable impact on these children. They take great pride in their work, they feel successful, and their self concept has become positive."	
"Yes - Plans are being made to replicate the services of skilled trainer-facilitator."	
"Too small in scope. Much mainstreaming already being done."	

TABLE 30

Parent Questionnaire

1973 - 1974

Has your child been involved in Project Mainstream during the past school year?

Yes 89% No 8% Don't Know 3%

Would you like your child to be involved in Project Mainstream next year?

Yes 90% No 5% Don't Know 5%

Did you attend any of the parent meetings held by Project Mainstream staff?

Yes 76% No 24%

(If Yes): How many did you attend?

One 45% Two 21% Four 7% Five 3%

All 10% No answer 14%

How satisfied were you with the parent workshops?

66% Very satisfied
21% Somewhat satisfied
7% Somewhat dissatisfied
3% Dissatisfied
3% Not sure

Have you noticed any change in your child since school began last fall?

Change in Behavior

34% Great improvement
47% Some improvement
3% No improvement
3% Can't tell
13% Child has no behavior problem

Change in Attitude Toward School

50% Much more positive toward school
31% Somewhat more positive toward school
11% No change in attitude toward school
3% More negative toward school
5% Child always had a positive attitude toward school

Change in Physical Coordination

34% Great improvement
50% Some improvement
5% No improvement
3% Can't tell
8% Child has no problem in physical coordination

Table 30 (Continued)

Change in Reading Achievement	
53%	Great improvement
32%	Some improvement
10%	Can't tell
5%	No answer
Change in Arithmetic Achievement	
55%	Great improvement
37%	Some improvement
5%	Can't tell
3%	Child has no problem in arithmetic
Change in Handwriting	
44%	Great improvement
44%	Some improvement
6%	No improvement
3%	Good handwriting never a problem
3%	No answer

TABLE 31

Parent Questionnaire

1974 - 1975

Has your child been involved in Project Mainstream during the past school year?

Yes 70 % No 7 % Don't Know 23 %

Is your child participating in activities in a regular school class as well as in a Special Education class?

Yes 70 % No 21 % Don't Know 0 % No answer 9 %

(If YES):

a) How do you thing your child feels about moving from one class to another? (Check one)

72.1% My child doesn't find it difficult to move from one class to another

9.3% My child would prefer to remain in one class.

9.3% I don't know how my child feels

9.3% No answer

b) Does your child find the work harder in one class than the other? (Check one)

42.0% Work is harder in the regular class

4.5% Work is harder in the Special Education class

37.0% Work is about the same in both classes

4.5% I don't know how my child feels

12.0% No answer

c) Do you think your child likes one class more than the other class? (Check one)

21.0% My child prefers the Special Education class

46.0% My child prefers the regular class

19.0% My child likes both classes the same

2.0% I don't know how my child feels

12.0% No answer

Table 31 (Continued)

d) Do you think your child has more friends in one class than the other class?
(Check one)

16.5%	My child has more friends in the special education class
30.0%	My child has more friends in the regular class
28.0%	My child has the same number of friends in both classes
16.5%	I don't know if my child has more friends in one class than another
9.0%	No answer

Have you noticed any change in your child in the following areas since school began last fall?

	Positive Change	Negative Change	No Change	No Answer
a. Reading achievement	88%	2.5%	7%	2.5%
b. Arithmetic achievement	86%	5.0%	7%	2.0%
c. Behavior	75%	2.0%	21%	2.0%
d. Attitude toward school	61%	9.0%	30%	0%
e. Physical coordination	60%	7.0%	28%	5.0%

Were parent workshops held at your school this year?

Yes 72% No 16% No answer 12%

(If Yes): Did you attend any of these workshops?

Yes 44% No 44% No answer 12%

TABLE 32
Parent Questionnaire

1975 - 1976

1. Has your child (_____) been involved in Project Mainstream during this school year?

YES 44% NO 4% DON'T KNOW 33% DIDN'T RESPOND 19%

Please answer the following questions even if your child does not spend part of his/her time in a regular classroom.

2. Have you noticed any change in your child in the following areas since school began last fall?

	Positive Change	Negative Change	No Change
a. Reading achievement	82%	11%	7%
b. Arithmetic achievement	83%	4%	13%
c. Behavior	61%	13%	26%
d. Attitude toward school	68%	8%	24%
e. Physical coordination	68%	12%	20%

3. Have parent workshops been held at your school this year?

YES 55% NO 30% DIDN'T RESPOND 15%

(IF YES): Did you attend any of these workshops?

YES 41% NO 36% DIDN'T RESPOND 23%

4. How would you rate these workshops? (Check one)

40% Very helpful

33% Somewhat helpful

7% Not very helpful

20% Did not respond

5. Is your child participating in activities in a regular school class as well as in a Special Education class?

YES 68% NO 9% DON'T KNOW 14% DIDN'T RESPOND 9%

(IF YES): a) How do you think your child feels about moving from one class to another? (Check one)

73% My child doesn't find it difficult to move from one class to another.

14% My child would prefer to remain in one class.

_____ I don't know how my child feels.

14% No Response.

b) Does your child find the work harder in one class than the other? (Check one)

55% Work is harder in the regular class.

_____ Work is harder in the Special Education class.

27% Work is about the same in both classes.

9% I don't know how my child feels.

9% No Response.

c) Do you think your child likes one class more than the other class? (Check one)

27% My child prefers the Special Education class.

27% My child prefers the regular class.

36% My child likes both classes the same.

5% I don't know how my child feels.

5% No response.

d) Do you think your child has more friends in one class than the other class? (Check one)

36% My child has more friends in the Special Education class.

23% My child has more friends in the regular class.

27% My child has the same number of friends in both classes.

9% I don't know if my child has more friends in one class than another.

5% No response.